## SPEC® CINT2006 Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL360 Gen10  
(1.70 GHz, Intel Xeon Bronze 3106)

### SPECint® Rate2006 = Not Run

**SPECint_rate_base2006 = 436**

| Test Date: | Nov-2017 |
| Hardware Availability: | Oct-2017 |
| Software Availability: | Sep-2017 |

### CPU2006 License: 3

| Test Sponsor: | HPE |
| Tested by: | HPE |

### Hardware

| Software | Operating System: | SUSE Linux Enterprise Server 12 (x86_64) SP2 |
| Compiler: | C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux |
| Auto Parallel: | No |
| File System: | xfs |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | Not Applicable |
| Other Software: | Microquill SmartHeap V10.2 |

- **CPU Name:** Intel Xeon Bronze 3106  
- **CPU Characteristics:**  
  - CPU MHz: 1700  
  - FPU: Integrated  
  - CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip  
  - CPU(s) orderable: 1, 2 chip(s)  
  - Primary Cache: 32 KB L1 + 32 KB D on chip per core  
  - Secondary Cache: 1 MB I+D on chip per core  
  - L3 Cache: 11 MB I+D on chip per chip  
  - Other Cache: None  
  - Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R, running at 2133)  
  - Disk Subsystem: 1 x 600 GB SATA SSD, RAID 0  
  - Other Hardware: None

### SPECint2006 Result

| SPECint_rate_base2006 = 436 |

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>SPECint_rate2006</th>
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<td>perlbench</td>
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**Standard Performance Evaluation Corporation**  
info@spec.org  
http://www.spec.org/
Results Table

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<th>Seconds</th>
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<td>625</td>
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</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled by default
Filesystem page cache cleared with:
shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
irqbalance disabled with "service irqbalance stop"
tuned profile set wth "tuned-adm profile throughput-performance"
VM Dirty ratio was set to 40 using "echo 40 > /proc/sys/vm/dirty_ratio"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/ numa_balancing"

Platform Notes

BIOS Configuration:
Thermal Configuration set to Maximum Cooling
LLC Prefetch set to Enabled
LLC Dead Line Allocation set to Disabled
Memory Patrol Scrubbing set to Disabled
Workload Profile set to General Throughput Compute
Minimum Processor Idle Power Core C-State set to C1E
Workload Profile set to Custom

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CPU2006 license: 3
Test sponsor: HPE
Tested by: HPE

Platform Notes (Continued)

Sub-Numa Clustering set to Disabled
Sysinfo program /home/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-perm Sun Nov 12 11:59:09 2017

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Bronze 3106 CPU @ 1.70GHz
  2 "physical id"s (chips)
  16 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 8
siblings : 8
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 11264 KB

From /proc/meminfo
MemTotal: 197751660 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 2
# This file is deprecated and will be removed in a future service pack or
release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP2"
VERSION_ID="12.2"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
ID="sles"
ANSI_COLOR=0;32
CPE_NAME=cpe:/o:suse:sles:12:sp2

uname -a:
Linux linux-perm 4.4.21-68-default #1 SMP Tue Oct 18 18:19:37 UTC 2016
(63cf368) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 12 11:05

SPEC is set to: /home/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
Continued on next page
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**Test date:** Nov-2017  
**Hardware Availability:** Oct-2017  
**Software Availability:** Sep-2017

**Platform Notes (Continued)**

```
/dev/sda4  xfs  517G  64G  453G 13% /home
```

**Additional information from dmidecode:**

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

**BIOS** HPE U32 09/29/2017  
**Memory:**  
24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz, configured at 2133 MHz

(End of data from sysinfo program)

**General Notes**

Environment variables set by runspec before the start of the run:  
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM memory using Redhat Enterprise Linux 7.2

**Base Compiler Invocation**

**C benchmarks:**

```
icc -m32 -L/opt/intel/compilers_and_libraries_2018.0.082/linux/lib/ia32
```

**C++ benchmarks:**

```
icpc -m32 -L/opt/intel/compilers_and_libraries_2018.0.082/linux/lib/ia32
```

**Base Portability Flags**

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**Base Optimization Flags**

C benchmarks:
- `xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -qopt-mem-layout-trans=3`

C++ benchmarks:
- `xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch -qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/home/cpu2006/sh10.2 -lsmartheap`

**Base Other Flags**

C benchmarks:
- `403.gcc: -Dalloca=_alloca`

The flags files that were used to format this result can be browsed at:
- [http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.html](http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.html)

You can also download the XML flags sources by saving the following links:
- [http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.xml](http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revG.xml)

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For other inquiries, please contact webmaster@spec.org.

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